

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

#1
766 Fc

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION 6

U. S. F. S. RECEIVED
LIBRARY

JUN 27 1937

FIRE CAMP ACCOUNTING AND MANAGEMENT



MAY 1933

TABLE OF CONTENTS

	PAGE NOS.
Introduction.....	3
Hiring Men.....	3
Rates of Pay.....	5
Sample Contract.....	8
Interpretation of Contract.....	9
Back-of-the-Line Organization.....	13
Fire Organization Chart.....	15
Organizing Fire Line Forces at Camp.....	16
Organization Plan for Fire Crews.....	17
Organizing and Supervising Camp Forces.....	21
Camp Arrangement and Sanitation.....	22
Fire Camp Diagram.....	25
Ordering and Distributing Men.....	26
Timekeeping.....	26
Sample Time Slip.....	28
Explanation of Time Slip, Form F-2 R-1.....	29
Commissary Accounting.....	30
Property Accounting.....	34

Subsistence Supplies.....	35
Tools and Equipment	39
Transportation.....	40
Communication.....	43
Record of Liabilities and Progress of Fire.....	43
Accounting on Fires where there is a Possibility of Court Action to Recover Costs.....	45
Compensation for Injury Reports.....	47
Ration Tables.....	48
Forms and Stationery.....	57
Standard Outfits of Tools and Equipment as Furnished from Vancouver.....	58

INTRODUCTION

The purposes of this pamphlet are:

1. To establish rules for hiring men for fire suppression work and to explain in detail the standard fire fighters' contract and fire time slip used on the national forests in Region 6.
2. To present specific instructions for the guidance of camp bosses and others in handling the various activities carried on in fire camps.

A large part of the labor trouble on fires can usually be traced to one of three causes: (1) variations in agreements made with different crews or by different officers, (2) misrepresentations or misunderstandings between employing agent and employee, or (3) radical variations between individual officers in methods of computing time, allowances, etc. To eliminate these variations and misunderstandings the fire fighter's contract has been adopted as the standard basis on which all fire fighters must be hired, and standard rules for hiring men and interpreting the contract have been established.

The instructions for handling fire camp activities are intended to systematize and simplify the work so that the camp boss and his crew can handle it in a satisfactory manner with a minimum of supervision by the crew boss. It is usually necessary, at least in the smaller camps, to use temporary men as camp bosses, and where yearlong officers are in charge of large camps temporary men must be used as assistants. For this reason fire plans should provide for the selection and training in advance of a sufficient number of men suitable for the position of camp boss and timekeeper. This pamphlet will serve as a textbook during the training period as well as a ready reference in the fire camp.

HIRING MEN

In hiring men for fire suppression work the following points should be observed:

1. Secure men fitted for the work and see that they have suitable clothing, particularly footwear.
2. Be sure that every man understands the terms of his contract, particularly those dealing with transportation and travel time allowances, which are provided for in the contract, because it is impossible to determine in advance how long the job will last.
3. Explain probable living and working conditions.
4. State approximate mileage men will have to walk to reach fire camp.
5. State specifically whether or not men are to furnish their own bedding.
6. Always ascertain whether cooks and flunkies have been provided. Failure to hire flunkies frequently leads to difficulty, as fire fighters contracted at hourly rates usually are not willing to serve as flunky at the daily rate for that position, and the result is a shortage of kitchen help until flunkies can be brought in.
7. Make sure every man understands time and place of assembling. Where necessary indicate special directions on contract.
8. Put one man in charge of party and furnish him with specific instructions, in writing, for reaching destination. Give him a map on which have been drawn the details of route to fire camp.
9. Form 67-R-6, Fire Fighter's Contract, should always be filled out for crews hired in general labor centers. Elsewhere it should be used as far as practical and provided no serious delay is involved. When formal contract is not signed, as in the case of certain local residents, men hired by telephone, etc., it is imperative that verbal agreements conform strictly to the terms of the standard contract.
10. The contract form should be filled out in duplicate, the originals for the group being sent to the fire camp in sealed envelope with the truck driver or man in charge of crew, and the duplicates being given to the employees.

RATES OF PAY

Each year in advance of the fire season the regional forester will issue a schedule of maximum rates of pay for fire fighters. These rates must not be exceeded without approval of the regional forester, but where conditions warrant, lower rates should be used. Where a range in rates is given in the schedule the higher rates will be used only in cases of outstanding ability and large responsibility.

In special cases where fire fighters furnish their own subsistence they should be hired at standard rates plus a flat allowance per day for board, as fixed in the annual wage rate schedule.

On fires of short duration where the total time involved does not exceed two hours, settlement may be made on the basis of the job, with a flat payment of \$1.00.

While the maximum rates specified in the annual schedule must never be raised without first securing approval of the regional forester, the officer in charge of fire has authority to promote his most competent men through reclassification, as from laborer to strawboss. In promoting such men be sure to fix a definite rate somewhere within the standard rates for the new position.

A decrease in the rate stated in the contract cannot be made without violating the contract. On the other hand, strawbosses, foremen, etc., who have been granted increases through promotion may at any time be reduced, on notice, to the original contracted rate. If a man's services in a contracted position are unsatisfactory, or if size of crew or other conditions change so that the position or rate is not justified, he must be discharged or laid off, or by mutual consent, the original contract must be terminated and a new one drawn up. Such cases may come up in connection with contracted foremen or strawbosses who are good laborers but unsatisfactory for larger responsibilities, or in the case of contracted fire fighters who are willing to change to other jobs, as flunkeying, packing, etc.

Members of Forest Service road and trail crews, when shifted to fire suppression work, will be paid

standard fire fighters' wages in accordance with the schedule issued by the regional forester. Their contracts, signed at the beginning of their road and trail employment, provide for this. Their time on suppression work, including travel allowances to and from the fire, will be paid from fire fighting funds and should be submitted on the regular fire time slip.

Where road and trail and other improvement crews are held during working hours at some point during electrical storms and no work is available, they should be paid as follows:

1. If fires do not occur and the men are returned to their regular projects without being engaged on fires, they should be paid from fire fighting funds at the regular rates they were receiving on the regular projects.

2. If after being held in readiness, they are sent to reported fires, actual or false alarms, waiting time should be paid from fire fighting funds at the established fire wage scale. Only such waiting time will be allowed as is required to make up an eight-hour day.

3. Men held in camps on Sundays and holidays when fire conditions are such that it is necessary to have part or all of the crew available for quick action on fires will receive no extra pay from any appropriation for this service. It is covered in their original contracts. In such cases board must be charged without exception.

Forest officers, including firemen, patrolmen, lookouts, etc., when on fire suppression work, will receive their regular monthly rates of pay regardless of capacity or hours involved. This applies even where men are transferred from one Forest to another.

Organized crews secured outside the Forest Service will be paid as follows:

1. If the company or contractor is not responsible for the origin or control of the fire,
 - (a) The men will be paid directly by the Forest Service according to the standard scale of fire

fighters' wages.

(b) If the company or contractor is apparently sustaining material loss due to the absence of the men from their regular work, crews should be brought in to replace them on the fire as soon as practicable, and in any case within three days.

2. If the company or contractor is responsible for the origin or control of the fire and its representative has signed the Form R-6-11-LE-1 (thereby agreeing to pay the costs incurred by the Service), the company or contractor will determine the rate of pay and make settlement with the men even though they may work under the supervision of a forest officer.

3. If the company or contractor is clearly responsible for the origin or control of the fire, but it is necessary for the Service to take over the crew or hire additional men through failure of the company or contractor to handle the fire properly on all sides and they also refuse to sign a Form LE-1, the Service will pay the men directly at its standard rates and later look to the company or contractor for settlement through legal procedure if necessary.

Where timber sale operators handle fires for whose origin or spread they are not responsible, the Forest Service pays all expense above the purchaser's maximum liability specified in the contract. In such cases payment for services of the operator's men must be made directly to the men at standard fire fighting rates, their time being submitted on Forest Service pay rolls.

NOT NEGOTIABLE

Form
F-2-R. 1

Sample

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

TIME SLIP

Mr. Baker Forest
Talla Co. Project

14 Contract No. 27

Name John E. Doe

Address Everett, Wash.

Place Seattle, Wash.

Hired Paymaster at Pullingham, Wash.

DATE	COMMISSARY	CHARGE
8/26	Job 15 papers 05	20
8/30	Cigs 10 Sox 20	30
9/1	Job 30 papers 05	35
9/5	Shirt 1 1/2 cigs 10	1 10

1933 CLASSIFICATION		TD	
DATE	TRAVEL TIME	DATE	TRAVEL TIME
8/26	4	8/26	4
8/26	5	8/26	5
8/27	8	8/27	8
8/28	10	8/28	10
8/29	10	8/29	10
8/30	2	8/30	2
8/31	8	8/31	8
9/1	10	9/1	10
9/2	4	9/2	4
9/3	1	9/3	1
9/4	1	9/4	1
9/5	8	9/5	8
9/6	8	9/6	8
9/7	8	9/7	8
9/8	4	9/8	4

I certify that I have received the supplies itemized herein and that commissary and property charges are correct and time as itemized is satisfactory.

Signature John E. Doe

RELEASED—DISCHARGED—QUIT

I certify this amount to be correct.

Timekeeper

W. E. Brown

Return transportation should be furnished to

Commissary	Property
1 95	3 50
Deduct Total	5 45

DATE	TRAVEL TIME	DATE	TRAVEL TIME
8/26	4	8/26	4
8/27	8	8/27	8
8/28	10	8/28	10
8/29	10	8/29	10
8/30	2	8/30	2
8/31	8	8/31	8
9/1	10	9/1	10
9/2	4	9/2	4
9/3	1	9/3	1
9/4	1	9/4	1
9/5	8	9/5	8
9/6	8	9/6	8
9/7	8	9/7	8
9/8	4	9/8	4

Am't	Gross Amount Due	Net Amount Due
\$4.00	\$15.00	\$11.00
Rate .20	.25	.05
35	60	25
Deduct Total	5 45	27 05

INTERPRETATION OF CONTRACT

While the standard contract is specific its provisions, unless explained and elaborated, may be interpreted differently by different officers. For the sake of uniformity and fairness to everybody concerned the following rules for interpretation of the contract must be strictly adhered to:

1. "Actual number of hours worked under direction of forest officer" should be interpreted literally. It does not include the time of men who intentionally or otherwise become separated from their crew or lost, as such time is usually wasted. Also it does not include the rest period which is advocated during the lunch hour. Any lunch period of over 15 minutes should be deducted. Universal adherence to this rule is imperative—if one officer allows one-half hour, another will allow one hour, and so on. This gradually establishes a precedent for straight time from the time crews leave camp until they return. Such a practice is not customary in any other line of work, and can only be interpreted as a pernicious form of time sweetening.

2. Where desirable to hold men as reserves when there is no fire work to be done they should be offered employment at trail construction or other work in the vicinity in order that each man may have an opportunity to put in a reasonable day's time. No time will be allowed employees who refuse to do any work offered them during such periods.

3. "Walking time to and from work to be determined by forest officer in charge" means a reasonable amount of time for the average employee.

4. "A reasonable allowance as fixed by forest officer in charge to cover foot travel from point of hire to fire and return." Fix a reasonable time. This may usually be done on a mileage basis by dividing the number of miles walked by $1\frac{1}{2}$ to 3, depending on character of trail and amount of equipment carried.

5. "Transportation when available will be furnished by the Forest Service from point of hire to fire camps and return, except as specified in Clause 3." Saving of time and the better condition of men on arrival usually justify transporting men as far as vehicles can go. For returning, a special effort should be made to furnish equally good transportation. In special cases where employees do not wish to return to point of hire, they may be furnished transportation and travel item to any point, provided cost of each of these items does not exceed that of returning them to original point of hire.

6. "Employees being discharged or quitting while their services are still needed, and without approval of forest officer in charge, will not be allowed return transportation or any time allowance to or from point of hire if they have worked less than 10 days. If they have worked at least 10 days but less than 20 days, they will be allowed walking time from point of hire only and no return transportation; if 20 days or more, they will be allowed return transportation and walking time allowance to and from point of hire."

"While their services are still needed" should be construed to mean for any fire protection work, including employment on other fires, mop-up work, or even improvement work pending development of fires temporarily checked, but the contract rate of pay may not be reduced unless a new contract is made. Exceptions to this rule may be made in the following cases only:

(a) Employees who are injured while engaged in official work.

(b) Local men who are sustaining unwarranted personal loss through neglect of their own business and have agreed to help temporarily or until outside help can be secured (Applies to logging crews, threshing crews, road crews, etc.).

(c) Laborers who are clearly so physically deficient that the crew boss refuses to employ them (Applies to boys, cripples, old men, etc.). To employ them is a waste of money and to discharge them without time allowance to the fire camp and transportation both ways is an injustice, since the employ-

ing agent is at least partially responsible for the predicament. If allowed time and transportation, they must be returned immediately.

Men leaving on account of sickness before they have worked the required time will not be given travel allowances or free transportation, although every other possible assistance should be rendered. Any attempt to make exceptions to this rule would defeat the object of the contract.

"Any time allowance to or from point of hire" will include only walking time. It will be entered on time slips as travel time even though employees carry fire tools to camp.

7. Employees not entitled to free transportation back to point of hire should be furnished ample lunches up to the time they reach a settlement, and in case they are without funds they should be furnished transportation, the cost of same being deducted from their wages. Fair treatment of men who quit or are discharged is imperative. Transportation in Government trucks on regular trips may, of course, be furnished without cost to any man leaving the job.

8. Employees entitled to free transportation should be furnished subsistence en route back to point of hire. Where necessary this may be done by ordering meals for them at restaurants or hotels. Ordinarily it should not be necessary to furnish lodging at hotels to employees either going to the fire or returning to point of hire, but this may be done in special cases where other means of lodging them are not available.

9. "Only in extreme emergencies will crews be allowed to work more than 10 to 12 hours a day." For the first day or two the fire chief may be justified in working every man to the limit if by so doing he stands a good chance of bringing the fire under control and preventing further spread. After this period, however, crews should be held down to 10 or, at the most, 12 hours a day, for the reason that longer shifts soon result in their becoming so exhausted that results do not justify the increased wage. While much must be left to the judgment of the fire chief, it should be remembered that long shifts

usually indicate "time sweetening" or poor management and will at least call for careful investigation by the supervisor or regional office.

10. "Employees hired on a daily or monthly basis, such as cooks, packers, clerks, etc., will not be allowed overtime." This class of labor is customarily hired on a daily or monthly basis for the reason that usually it would be impossible to ascertain the exact number of hours worked each day. The flat rate established takes into account the fact that there will be a considerable fluctuation in the amount of labor performed on different days and is intended to cover it. In no case should these men be allowed overtime by figuring on an hourly basis and crediting them with $1\frac{1}{2}$ days, etc. If pressure of work becomes too great on any one man, he should be provided with an assistant or the work handled by two shifts.

11. "Commissary and property charges will be entered on time slip and amounts deducted from total amount due." The value of commissary issued must not exceed the amount of wages earned. For details of handling commissary and property charges see instructions for commissary and property accounting.

12. "All disputes about time must be settled with timekeeper or foreman before accepting time slip." While not specifically stated in the contract, this is also true of deductions.

It is essential that disputes about time be settled on the ground. Strawbosses are responsible for turning in correct time to the timekeeper each day, and they are the only men in position to know how many hours the employee works. The employee's signature to his time slip should mean that he has checked the time and deductions and accepts the net amount due as correct.

13. "The Government will not be responsible for personal property." In large camps no effort whatever should be made to care for personal property of employees. In small camps, where but little time is involved, a reasonable effort may be made, but before any personal property is accepted for safe keeping the employee's attention should be called to Clause 8 of his contract.

BACK-OF-THE-LINE ORGANIZATION

The successful handling of a project fire depends to a large extent upon efficient functioning of the back-of-the-line organization. This organization is just as important as the forces employed on the fire line, because these forces cannot function without an adequate service of supply. They must have adequate equipment, plenty of wholesome food, and well-managed camps in which to rest at night. Their time must be kept correctly and every detail of the camp activities must be planned and carried out in an efficient manner, so that the crew boss will be able to devote the maximum amount of his time to the management of the fireline organization.

The position of camp boss embraces large responsibilities. The actual scope of his work is determined by the crew boss in each individual case. Ordinarily he has charge of all camp activities in one fire camp, which include giving assistance in fireline organization, organizing and supervising all camp forces, camp arrangement and sanitation, ordering and distributing men, checking, estimating needs, and ordering supplies and equipment, reconditioning tools or assembling them for condemnation, and keeping track of all equipment, arranging for transportation, timekeeping and accounting, handling of commissary, establishing and maintaining communication, and recording and reporting the daily progress of the fire.

In small camps the camp boss may personally handle nearly all of these activities, but in large camps he will find it necessary to select assistants to handle certain jobs or groups of jobs. Such assistants may be designated equipment men, transportation men, timekeepers, etc.

On large project fires where it is necessary for the fire chief to have help in co-ordinating the activities of camp bosses and all back-of-the-line functions an organization chief may be employed. He is responsible to the fire chief, and has supervision of camp bosses in several camps. He is usually a yearlong officer of wide experience and organizing ability.

A typical back-of-the-line organization, tied in to the fireline organization, is shown in Figure 1. Where necessary to employ an organization chief there would, of course, be several camps, each in charge of a camp boss working directly under a crew boss, the activities of all camps being co-ordinated by the organization chief as indicated in the diagram. Each crew boss would ordinarily have three or more foremen under him, each in charge of three or more strawboss crews. For simplicity only one clock is shown for each position. The organization in each camp would duplicate the one shown, but the number of men in the camp crew would depend on the amount of work. The camp boss would personally perform such of the duties of the first four positions listed under his position as he had time for, and two or more of these positions might be filled by a single assistant.

FIRE ORGANIZATION CHART

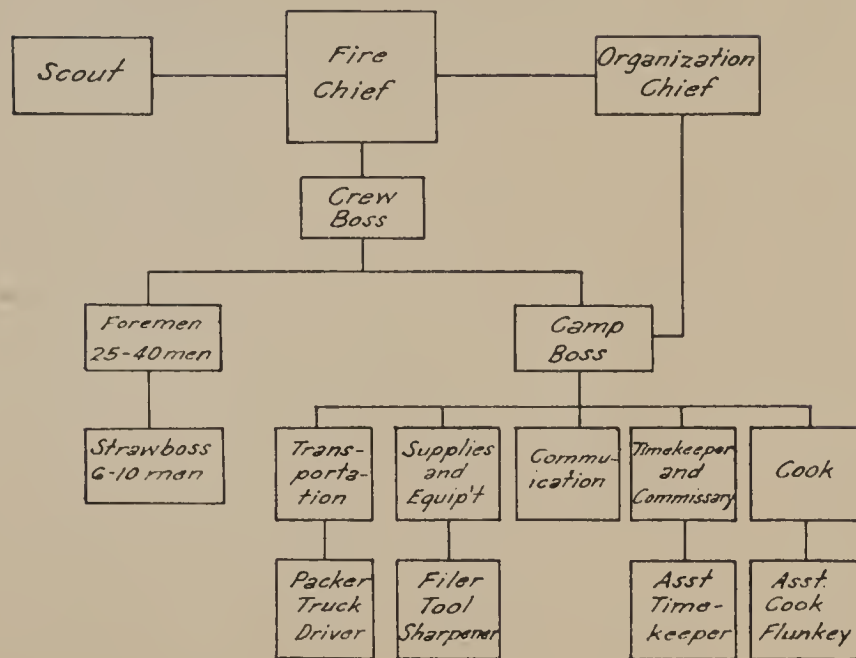


Fig. 1

ORGANIZING FIRE LINE FORCES AT CAMP

Large crews may arrive at a fire under varying conditions and the problem of organizing and getting them started for the fire line may become very difficult. In any situation where a large number of men must be organized in a hurry a foolproof, previously prepared plan is essential to avoid confusion and loss of time and efficiency. Figure 2, with explanation, illustrates how to organize a crew of men into strawboss units, equip them with tools and get them started for the fire line in the shortest possible time.

ORGANIZATION PLAN FOR FIRE CREWS

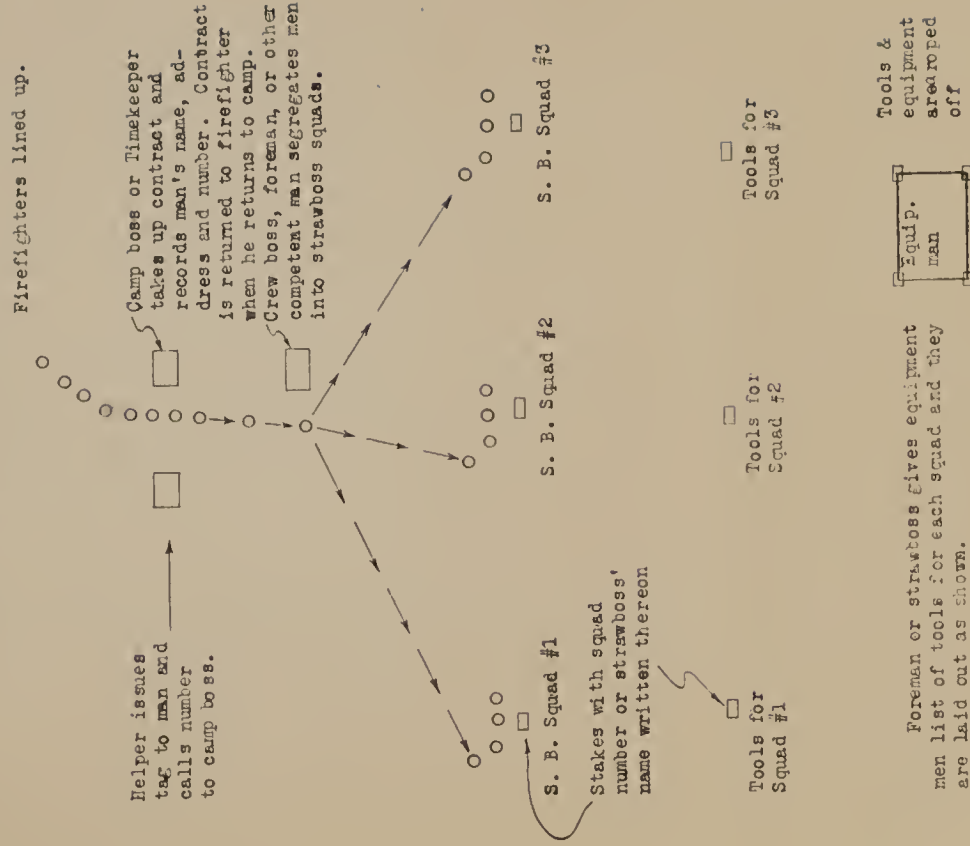


FIG. 2

EXPLANATION OF FIGURE 2

The men are lined up, and pass by station 1. Here the campboss or timekeeper (usually with a helper, although this is not essential) issues each man a number, takes up his contract and jots the number thereon. Firefighter's copy of contract is returned to him later after entries in time book have been made and original contract has been delivered by truck driver or chief of party. If the man has no contract, the camp boss either records the man's name, number and address in a notebook if he considers contract not necessary, or if it is, he sends him to an assistant at one side to have a contract prepared. Sample tags are shown in Figures 3, 4 and 5. The man then passes to station 2, where he is assigned to a strawboss crew.

If the crew boss is in camp and is organizing a fairly small crew, he probably will want to segregate the men into strawboss crews himself. If not, he may assign the foreman to do it. If they are both on the fire or busy planning the attack, the crew boss may assign some competent man to do this, preferably one who is familiar with the men's qualifications, such as a woods boss for a logging crew, etc. As the men pass by station 2, they are directed to strawboss squad Nos. 1, 2, or 3, and held in a unit until the squad is complete.

In the meantime, the 3 strawbosses have been given tool lists by the crew boss or foreman for their squads, in duplicate. The equipment section is roped off by the equipment man (usually the truck driver who brings it in is in charge) as soon as it arrives. The strawbosses each give the equipment man one list and retain the other. (See sample tool lists, Fig. 6 and 7.)

The equipment man lays out the equipment for each squad, as shown on the list, at the stake designated for that strawboss crew.

By the time the squads are completed the tools should be laid out. Each strawboss then takes his crew, assigns tools to each man, and is ready to go to the fire. If the men are transient laborers, and

he wants to make each man responsible for the tools assigned to him, he puts the man's number to the left of the man's tool unit, and gives him the tools listed therein. (See Figs. 6 and 7.)

SAMPLE TAGS FOR NUMBERING MEN

Date
No. _____
Firefighter

Fig. 3

A 22
A 22

Fig. 4

No. _____
Class of work
Strawboss

Fig. 5

Fig. 3 is a tag used by Region 1, and some forests in Region 6. It comes in colors to identify camps.

Fig. 4 is an ordinary plain linen shipping tag which is used by some forests. The letter is the camp designation, the number the man's number. The tag is torn in two: the upper half is pinned to the man's shirt with a safety pin when the crew is organized, the lower half is given the man as a bed-roll tag. He turns it in when he gets his bed-roll and the timekeeper files it with the man's time slip. When the bed-roll is returned, the man is given back his bed-roll tag or check.

Fig. 5 is a round tag (an ordinary commercial price tag) on which the man's number, class of work, and the name of his strawboss are written.

Fig. 6

STRAWBOSS EQUIPMENT LIST		
Strawboss	Foreman	
Tool Unit	Man No.	Tool List No.
A		1 Saw, F. & Hndls. 1 File, 8" 1 Oil for pitch 1 Lunch
B		1 Axe 1 Water bag 1 Sledge (filled) 2 Wedges 1 Lunch 1 Whetstone
C		1 Axe 1 File 10" 1 Whetstone 1 Lunch
D		1 Shovel 1 Canteen 1 Lunch
E		1 Shovel 1 Canteen 1 Lunch
F		1 Shovel 1 Canteen 1 Lunch
G		1 Shovel 1 Water bag, filled 1 Rake 1 Lunch
H		1 B. P. can filled 1 Lunch
Tools for line construction		
Ponderosa Pine or Lodgepole		

Fig. 7

STRAWBOSS EQUIPMENT LIST		
Strawboss	Foreman	
Tool Unit	Man No.	Tool List No.
A		1 Saw, F. 1 Saw handle 1 Wedge, F. 1 File, 8" 1 Axe, F. 1 Oil for pitch
B		1 Axe, F. 1 Saw handle 1 Sledge 1 Wedge, F. 1 Whetstone
C		1 File, 10" 1 Whetstone 1 Axe, D. B.
D		1 Hazel Hoe 1 Axe, D. B.
E		1 Hazel Hoe
F		1 Shovel
G		1 Hazel Hoe 1 W. Bag filled
H		1 BP can & pump
I		1 Hazel Hoe or Pulaski
J		2 Shovels
K		
L		
M		
N		
For initial attack give		
1 lunch to each man		

Fig. 6 is a strawboss equipment list for a line construction crew of 8 men in ponderosa pine or lodge-pole country. The strawboss' and foreman's names are written at the top, the tool list number corresponds to the squad number as shown in Fig. 2, and the man's number is written in the blank space to the left of the tool units when it is desired to make the man responsible for the tools he is given. The unit (A, B, etc.) is an aid in distributing the tools to the individual members of the strawboss crew. Other lists are necessary for other timber types, or other classes of work, such as backfiring, clearing, mop-up or Killefer crews.

Fig. 7 is much the same, intended for west side conditions. It provides spaces for additions to the list. Tool units not required can be crossed out.

It often happens that additional crews arrive in camp when the crew boss is on the fire line. It is then up to the camp boss to take charge, and with the help of his assistants and the individual in charge of the crew, organize the men as illustrated in Figure 2, issuing proper tools and lunches, if needed. It is ordinarily advisable to furnish each man with a lunch as he leaves for the fire line unless the crew boss has given instructions otherwise.

ORGANIZING AND SUPERVISING CAMP FORCES

It is essential that the camp crew be large enough to supply the demands of the fireline organization and keep the work up-to-date, but the number of men in this crew should be kept to the minimum consistent with good management. The crew may at first consist of a camp boss and cook only, later being expanded by the employment of assistants as indicated in Figure 1, or assistants may be necessary in the beginning. Whenever the work increases to a point where additional help is undoubtedly needed the camp boss should immediately call the matter to the attention of the crew boss.

It is the duty of the camp boss to organize, instruct, and supervise all back-of-the-line forces

working in his camp. When necessary to employ assistants each man should be put in charge of one or more branches of the work and held responsible. For example, a man may be put in charge of timekeeping and commissary, and if necessary an assistant timekeeper may be assigned to work under him. One man may be put in charge of supplies, equipment and transportation, with an assistant if the volume of work warrants.

When timekeeping and commissary accounting are delegated it is very important that the camp boss check the work daily to insure that the records are accurate, legible, and up-to-date.

The cook should handle the flunkies and assistant cooks. Where more than one cook is employed one man should always be designated head cook and be in charge of all kitchen help. Under the supervision of the camp boss he should arrange the shifts, see that the camp boss is informed as to supplies needed, and make arrangements for supplying lunches as called for.

When water is supplied to the fireline organization from camp, the water boys must be supervised by the camp boss. Lunches may be carried out by the water boys or flunkies as is most practicable.

CAMP ARRANGEMENT AND SANITATION

The proper arrangement of the camp is quite important from the standpoint of sanitation, convenience to the fire fighters and camp forces, and efficiency in handling the men. Often the topography does not permit of an ideal camp arrangement and in such cases the best use of the grounds available must be made.

Following are the main points to consider when setting up a camp:

1. Promptly on arrival at the camp site select the best locations for tools, timekeeper's and commissary quarters, kitchen, garbage pits, toilets, parking grounds for trucks (if on road), grounds for pack stock and feed, and sleeping quarters for the men. As soon as possible all snags that might

fall on the camp should be cut.

2. The kitchen should be located near but below the source of water supply. Put up a railing around the kitchen and require the men to stay outside of it. One or more sides of the kitchen railing should be a cafeteria table made of shakes or strips of canvas nailed to poles. When the crew is large it is always best to serve meals cafeteria style. In order to avoid congestion and save time in getting out on the line the men should be called to breakfast and served by strawboss units. Provide boxes or tubs for plates, cups, silverware, and garbage, and require the men to clean their dishes and deposit them in the proper places.

3. Cleanliness in the kitchen, both as to persons and dishes, must be insisted upon. It is important that every precaution be taken to prevent sickness among the men. See that spoiled food is not used, that lemonade is not made in galvanized or tin containers, that dishes are properly washed and soap rinsed from them. Everything possible should be done to get rid of flies. Do not let cans and bits of food lie around; see that they are gathered into the garbage pit promptly. Protect meat with wool sacks.

4. Garbage pits should be located below the source of water supply and, if possible, at least 100 feet from any stream and from the kitchen. The refuse in the pits should be covered with a layer of earth each day.

5. Food supplies should be arranged in an orderly manner so that inventory can be quickly taken. Flies or tents should be provided for protection from the weather.

6. Toilets must be located below the source of water supply, at least 150 feet from any stream and 200 feet from the kitchen. If the crew is large, more than one toilet will be necessary. Toilet trenches must be sprinkled with a thin layer of earth at least twice each day. Signs directing men to toilets should be posted.

7. The camp boss' office and telephone should be placed near the kitchen and arranged conveniently so that the work can be handled in a business-like manner. The camp boss or the timekeeper and commissary man should sleep in the office and take all possible precautions to protect commissary supplies and property from theft. A desk or table made of poles and boxes should be set up in a convenient location where incoming crews can be lined up, their names, etc., taken by the timekeeper, and the men assembled in strawboss units.

8. As soon as they are unloaded tools should be laid out on the ground or hung up on poles in an orderly manner and enclosed with a rope or pole railing. The location of the tool supply should be as convenient as possible for assembling, issuing, and reconditioning tools. Separate places should be provided for storing strawboss outfits when brought in at night.

9. Sleeping grounds should be selected out of the way of camp activities. The men should be segregated by strawboss units and each strawboss held responsible for seeing that his men make their beds in the place selected for them. Locations for warming fires should be selected so that the men will have no excuse for standing around the kitchen fire.

10. Where the camp is on a road, trucks and cars should be parked systematically in a position that will not block traffic. The parking grounds should be a reasonable distance from the kitchen and, if possible, so located that dust will not be blown into the kitchen.

11. The place provided for taking care of pack stock and storing feed should be a considerable distance from the kitchen. Stock should be taken to this location promptly after loads are removed.

A convenient camp arrangement, satisfactory as to placement of toilets, garbage pit, etc., with reference to the water supply and kitchen, is shown in Figure 8. Parking and stable grounds are not shown for lack of space.

FIRE CAMP DIAGRAM



ORDERING AND DISTRIBUTING MEN

Orders for men will usually come from the fire chief or crew boss, with instructions as to where they are to be used on the fire line. Whenever such orders are received forward them immediately to the district ranger's headquarters or other point, as required, ascertain the approximate time the men will arrive in camp, and make provision for meals, lunches, equipment, etc., and for distributing the men according to instructions received.

TIMEKEEPING

The camp boss and timekeeper must become thoroughly familiar with the standard wage rate schedule and every clause of the standard labor contract, rules for hiring men, and interpretation of the contract. It is imperative that these rules be adhered to in all cases. A copy of the wage schedule will be kept in the timekeeper's kit.

The camp boss and foreman will see that each strawboss keeps a detailed time record for every member of his crew in time book, Form 875, and turns it in to the timekeeper every evening for recording in the camp time book or on time slips. The foreman should check each day or at adequate intervals the timekeeping practice of each strawboss. Individual members of the crews will not be checked in and out of camp by the timekeeper, but the strawbosses should be required to report to him when they leave and return to camp with their crews. In addition to transcribing the time obtained from strawbosses' books each evening the timekeeper will be responsible for direct record of the time of the camp crew, foremen, scouts, and other employees, except yearlong officers and regular guards. Packers' and truck drivers' time may be kept at the camp or elsewhere, depending on conditions.

It is always necessary to preserve a complete record in each camp, to be turned in to the district ranger when the project is completed and for use in computing costs, balancing commissary accounts,

etc. The time slip provides for a copy, which is marked "Duplicate." In small camps the duplicate time slips will suffice for the camp record of time, but in large camps it is advisable to keep a record in the Forest Service standard time book, Form 880. Where this is done a time slip for each man should be started early and brought up-to-date every three or four days, so as to avoid delay when men quit or are laid off. Time should be entered to the nearest half hour for the total day's work. There is no need to copy details as to shifts, time out, etc.

The original time slips must always be sent to the district ranger's or supervisor's office, or to the paymaster, where one is employed, at the time the men quit, are laid off, or are transferred to another camp. When a man is transferred his original time slip should carry a notation showing where he went, *e. g.*, "Transferred to Camp D 8/24," or "Transferred to Roaring Creek Fire 8/24."

In case men are transferred their duplicate time slips will be sent to the timekeeper at destination by the packer, truck driver, or man in charge of the crew, or if only one or two men are transferred, by the men themselves. If no camp time book is being kept, it will be necessary to make second duplicates for the camp from which the men are shifted. Be sure to use duplicate forms, not originals, for this.

Where the system of numbering men is used each man's number should be entered opposite his name in time books and also placed on time slips. If numbers are not used, the names should be listed alphabetically in the camp time book and time slips should be arranged the same way.

Where camps are designated by letter the letter should appear above the man's number, *e. g.*, $\frac{B.}{74} \frac{C.}{71}$
If men are received by transfer from another camp, they should be assigned new numbers.

Sample Copy

ODDEN-7-11-33-8000

Form 67-R6

FRAUD

Fire fighters who receive transportation, food, or lodging and do not work are liable to prosecution.

No. 27 Date 8/7, 1933

FIRE FIGHTER'S CONTRACT between the U. S. Forest Service and

J. E. Williams (Name)
247 Alder St. (Address)

City Eugene State Ore.

Classification Laborer Point of hire Bend, Ore.

Rate of pay (20¢) per hour and board.

SPECIFIC RULES

1. Time for men hired on hourly rate shall be computed on the following basis:
 - (a) Actual number of hours worked under direction of forest officer.
 - (b) Walking time to and from work to be determined by forest officer in charge.
 - (c) A reasonable allowance as fixed by forest officer in charge to cover foot travel from point of hire to fire and return, except as provided in clause 3.
2. Transportation when available will be furnished by the Forest Service from point of hire to fires and return, except as specified in clause 3.
3. Employees not to be discharged or quitting while their services are still needed, and without approval of forest officers in charge, will not be allowed return transportation or any time allowance to or from point of hire if they have worked less than 10 days. If they have worked at least 10 days but less than 20 days, they will be allowed walking time from point of hire only and no return transportation; if 20 days or more, they will be allowed return transportation and walking time allowance to and from point of hire.
4. Only in extreme emergencies will crews be allowed to work more than 10 to 12 hours a day.
5. Employees hired on a daily or monthly basis, such as cooks, packers, clerks, etc., will not be allowed overtime.
6. COMMISSARY AND PROPERTY CHARGES will be entered on time slip and amounts deducted from total amount due.
7. IN CASE OF DISPUTE about time, no consideration will be given unless reasonable proof is provided. All disputes about time must be settled with timekeeper or foreman before accepting time slip.
8. The Government will not be responsible for personal property.
9. NO ERASURES OR ALTERATIONS will be allowed on time slips or contract form. Entries must be made in ink or indelible pencil.

In Case of Accident: Notify J. E. Williams

Address 493 N.E. 47th Ave., Portland, Ore

I hereby agree to the above conditions.

J. E. Williams Employee
J. J. Maason (Hiring officer)

Tall, short, medium, fair, dark, gray (check). Age 39

SPECIAL DIRECTIONS

Time and place of leaving 2:30 P.M. O.O. Bldg.
Method of travel and approximate mileage. Auto 15 foot 3
Report to Ranger Burgess at Falls Cr.

Present this to timekeeper at the fire

EXPLANATION OF TIME SLIP, FORM F-2-R-1

This form should be used for reporting fire suppression time only. A separate form should be used for each fire. All entries should be legible and made with ink or indelible pencil. There must be no erasures or alterations on time slips forwarded for payment. Illegible or questionable entries will result in payment being suspended.

Study carefully the sample time slip illustrated and make out your own reports accordingly. In case blank forms like the sample are not immediately available, be sure to show all necessary information in the camp time book and commissary account book.

Ascertain the project name from the crew boss and enter it on every time slip. Write the man's name in full and exactly the same in all his time slips and contracts. Under "Address" show where check is to be mailed. The blank under "Paymaster at" will be filled only when a paymaster is available locally, which will seldom be the case. Where the address is too long for the space provided, simply write "Over" and show the address on the back of the form.

Do not confuse "Contract No." with the man's camp number. If the contract carries a number it should be entered on the time slip in the space provided. If the numbering system is used on the project, write the man's camp number above "Name" on the time slip. The contract number and camp number will seldom be the same, but where they are the number should be entered in both places to avoid confusion.

The columns under "Travel Time" and "Working Time" provide for three classifications of work. The form does not provide for writing in these classifications, but they should be indicated immediately beneath the word "Classification." Abbreviations should be used: "L" for laborer, "SB" for strawboss, "TD" for truck driver, etc. When only one class of work is performed it can be indicated in full, *e. g.*, "Foreman," "Cook," etc.

Travel time going to the fire camp should be shown in the upper "Travel Time" block and time returning to point of hire in the lower block. When an employee leaves, if travel time to which he is not entitled under the terms of his contract has already been entered on his time slip, it should be crossed out, not erased. Where the classification of an employee changes, travel time returning to point of hire should be shown in the lower block under the classification of the last work performed.

There is not room in the "Date" column for the year. This should invariably be shown just above this column. The "Working Time" block provides for only 25 days. When a longer period is involved, use a second time slip.

The commissary account is simply an itemized bill against the employee, the total of which is deducted from wages due him. The cost of return transportation, board, etc., when furnished an employee who has not fulfilled his contract, should be entered here.

The property account is an itemized record of tools, equipment, and bedding issued to employees, to be returned by them or otherwise satisfactorily accounted for. The value of the property will be entered in the "Charge" column and when the articles are returned they will be credited at the same valuation. Any difference between the "Charge" and "Credit" columns will represent the value of property unaccounted for and will be deducted from wages due.

The time slip should invariably be signed by the timekeeper. The employee's signature should always be obtained where there are commissary or other deductions, and in all other cases unless clearly impracticable. The time slip should be completed and carefully checked before signatures are affixed.

COMMISSARY ACCOUNTING

Regulation A-4 provides that horse feed, equipment, food, articles of clothing, tobacco, and other personal supplies may be furnished employees, the cost of same to be deducted from their wages. Under

this regulation it is possible to purchase from Government funds clothing and personal supplies needed by fire fighters and issue them to the men at cost.

In the larger fire camps it is usually necessary to carry a stock of tobacco, cigarettes, socks, and possibly corncob pipes. Other items, such as shoes, shirts, overalls, and toilet articles, may be purchased on special orders when needed. Purchase orders for shoes and other comparatively expensive articles should be countersigned by individuals requesting them, and wages earned up to time of order should be sufficient to cover the cost. Soap, towels, candles, etc., for general use of the crew are considered a part of the camp equipment. Hobnails may also be furnished without charge.

Where the crew is small or the job of short duration it is desirable to avoid stocking commissary. This can usually be done by having employees pay the packer or truck driver in advance for any personal supplies they may need.

Commissary stocks are charged to officers receiving them, the same as property. The camp boss will be held responsible for a strict accounting for all commissary received and he may in turn hold the timekeeper responsible for articles turned over to him.

All orders for commissary supplies will be placed with the understanding that any undamaged surplus will be returned to merchants and only the net purchases vouchered. Make separate purchase orders (Form 877) for commissary, *i. e.*, do not put tobacco, socks, etc., on the same order with subsistence supplies for camp use. Designate the camp ordering and mark "Commissary Account."

Arrange with merchants to keep a separate account for commissary furnished and to submit separate bills to the supervisor's office. Insist that invoice or sales slip be furnished with each commissary shipment and fully itemized so that the amounts to be charged the men will be known.

Each shipment received from a merchant must be checked immediately with copy of Form 877, and

this form must then be receipted and sent to the district ranger or elsewhere as directed, a copy being retained in the camp files. Any discrepancies should be noted and necessary adjustments made promptly.

Where commissary is transferred from one camp to another it should be accompanied by an itemized list on Form 877, in duplicate. One copy of the form should be receipted and returned and the other filed by the receiving officer. Every effort must be made by officers transferring commissary to protect it from loss or theft. It should not be transported from headquarters to camps or between camps in open boxes, particularly when transported in a truck with laborers. Canvas bags with locks are available for transportation and protection of commissary in large camps.

Keep in an account book a record of commissary by items, showing amounts received and issued and balance on hand. Check this balance occasionally with stocks on hand. It is well also to keep an account in the book for each employee, although if the items are few they may be entered directly on his time slip instead. Where the job is of long duration and numerous articles are issued to one employee, the itemized book account may be signed by him and summarized on the time slip. This, however, should be done only when the space on the time slip is inadequate. Where considered advisable as a means of avoiding controversy the employee may be required to sign or initial his book account each time he receives commissary.

Commissary accounts should not be allowed to exceed amount of wages earned to date. If this is done, the camp boss or other officer responsible will be held accountable for any excess in case the employee quits or is discharged. Cash must not be accepted for commissary purchased with Government funds. Employees will be charged with the actual cost of articles issued to them, but in no case should a profit be made.

The practice of issuing commissary just before the men go out on the fire line is not desirable, as it causes delay and confusion. Post a notice that commissary will be issued only in the evening.

When an employee who has failed to fulfill his contract is furnished with return transportation or meals en route, the cost should be entered with commissary items on his time slip and deducted from wages. Standard transportation requests, Form 1030, must be used for all transportation on commercial lines, whether the cost is deducted from wages or not. For travel on railroads the transportation request must specify "Coach fare" so that the railway company's bill will show the lowest rate. Transportation requests will seldom be kept at fire camps. Ordinarily they will be made out at the district ranger's headquarters or other central point.

In case an employee is without funds the forest officer in charge or other yearlong officer may, in urgent cases, pay him cash for one or two days' work and secure a subvoucher, Form 1012D, for submitting with expense account, but advance payment before the work has been performed must not be made. The subvoucher must bear the endorsement, "Cash payment demanded." It must show number of hours worked by dates and this time on identical dates must be stricken from the employee's time slip; otherwise payment on the subvoucher will be refused by the fiscal agent on the ground that employee has already been paid for labor performed on these dates. Cash payments should be held to a minimum.

At the completion of the job a summary statement should be prepared showing by items the total number of articles issued and values deducted from wages, plus transfers, if any, to other camps. This added to an inventory of surplus stock on hand should balance with the total of bills received from merchants, plus Forms 877, if any, for transfers from other camps.

Undamaged surplus stock should be returned to merchants, or elsewhere, as directed, and an itemized list furnished the district ranger or supervisor so that similar items may be stricken from invoices and not vouchered.

Forms 858 must be submitted for all items lost or so damaged that they cannot be returned to

merchants. The forms must carry full explanation of loss or damage. The camp boss or other officer responsible will be held accountable unless explanation is satisfactory to the regional forester.

PROPERTY ACCOUNTING

Tools and equipment issued to strawboss units will be charged to strawbosses, who in turn may hold individual members of the crews responsible. (See explanation of Figures 2 and 6.) The value of such tools and equipment not satisfactorily accounted for will be deducted from the wages of the strawboss concerned or of members of his crew according to the circumstances in the particular case. Tools and equipment issued to individuals other than strawbosses, including yearlong officers and regular guards, will be charged to them.

Bed rolls will be charged to individuals receiving them, their bed rolls tags (see Figure 4) being taken up and filed with their time slips. The employee should be informed that he may, if he desires for his own protection, roll his bed before leaving for his work each day and turn it in to the timekeeper, getting it again at the end of his shift. Where this is done his bed roll tag will be returned each time the bed roll is turned in and taken up each time it is reissued, but his account will not be credited until the bed roll is finally turned in at the end of his employment. Presence or absence of the tag in the time slip file will show at any time whether the bed roll is in the timekeeper's or the employee's possession. A shortage of bedding sometimes makes it necessary for two men working different shifts to use the same bed roll. In such cases each man should, on arising, turn in the bed and receive his tag.

A fair valuation should be fixed for bedding and other property. Where the items are few they should be shown on the time slip, with the date issued and date returned. If there are too many items for the space provided, as in the case of tools charged to a strawboss, they may be shown individually in the account book only and summarized on the time slip.

SUBSISTENCE SUPPLIES

It is necessary to maintain a sufficient supply of groceries to always insure good meals and palatable lunches without carrying an excessive stock, which may be wasted in case the project closes suddenly. As a rule, the stock should be sufficient to last three to five days, depending on condition of fire and transportation facilities. Because of this small margin close attention must be given to the matter of taking inventory and ordering, so as to keep the stock balanced and avoid running out of certain essential articles or acquiring a wasteful surplus of others.

Luxuries such as oranges, expensive vegetables or fruits, corn flakes and other pre-cooked cereals, fancy cuts of meat, etc., should not be ordered. The five-day ration tables in this pamphlet contain a sufficient variety of staple foods and the furnishing of articles not shown in these tables is undesirable. It is desirable to furnish fresh vegetables in preference to canned vegetables where available at no greater cost. For camps on roads or where packing farther than five miles is not involved, certain fresh fruits which will stand transporting may be furnished if the cost does not exceed that of canned fruit. A reasonable proportion of dried fruit should be used even where packing is not involved, and for distant camps the proportion should be materially increased.

In the ration tables for camps where packing farther than five miles is involved, the question of weight has been carefully considered. To avoid unnecessary weight and excessive bulk, stick to these lists. For all such camps it is very important that containers be marked so that essential articles will not be overlooked on the first trip. Region One furnishes from its Spokane warehouse initial orders for 30-man crews packed and marked by meals, *e. g.*, "Supper, first day," "Breakfast, second day," "Dinner, second day," etc. In Region Six food supplies are not furnished from a central warehouse, but it may be practicable to make arrangements with local merchants to put up and mark initial orders in a similar way. The standard emergency rations, where available, may be used the first day or two.

Special attention should be given to supplies for individual lunches, particularly in initial orders. For such orders about one-third the meat allowance should be suitable for lunches and canned fruit should make up one-half the fruit allowance. Canned fruit for lunches should be purchased in No. 1 cans, so that one can may be issued to each man without waste. Initial crews should be furnished two lunches apiece unless it is certain that they will not be needed. Lunches should be put up in paper bags and these inserted in individual cloth sacks available for the purpose. Ordinarily this system should be used for noon lunches throughout the work as well as for those furnished initial crews. The men should be instructed to save the cloth sacks for use on succeeding days.

The following procedure is suggested in ordering supplies:

1. Use the one-man-one-day ration table as a basis for making up orders. The three-day and five-day tables, which are based on the one-day table, will be most convenient for initial orders.

2. Make a careful inventory of stock on hand every two or three days. For convenience, list the items in the same order as they appear in the ration table, showing substitutes for staple items directly after the staples. It is advisable to make inventory on Form 877 so as to preserve the figures for possible reference.

3. From the inventory determine the number of rations for which each article will serve by dividing the amount on hand by the amount required for one man for one day. Then by combining find the total number of rations on hand for each basic item, including its direct substitute, *i. e.*, find the number of rations on hand of meat, breadstuffs, cereals, potatoes, vegetables, fruits, beverages, milk, butter, shortening, salt, and miscellaneous small items. These figures divided by the number of men in camp will show how many days each item will last.

The next step is to figure out a tentative list of supplies which will balance up the stock on hand. If the total weight of this list is less than a full load for the pack train (where packing is necessary),

the final order should be made up by adding to it a complete balanced order for one or more days, depending on capacity of pack train, elapsed time before it will arrive and size of surplus stock which it is desirable to carry in camp.

For example, assume that in a camp of 60 men there is a 1 day's supply (or 60 rations) of milk and of potatoes, a 2 days' supply (or 120 rations) of meat and a 4 days' supply (or 240 rations) of all other essential items. Obviously milk, potatoes and meat are most urgently needed. The tentative list should, therefore, be for a 3 days' supply (180 rations) of milk and of potatoes and a 2 days' supply (120 rations) of meat. According to standard tables, this would mean about 60 cans of milk, 180 pounds of potatoes and 180 pounds of fresh meat, or a total weight of about 440 pounds. If this is not a full load for the pack train, add to it a complete list of supplies, including, of course, additional milk, potatoes and meat. For determining the number of complete rations which may be added to tentative list divide the additional weight which the pack train can carry by $6\frac{1}{2}$, which is the approximate weight of a ration for one man one day, including containers and cases.

4. Always consult cook as to special items desired, but never leave entire responsibility of ordering supplies to him.

5. Always write out every order for supplies on Form 877 and be sure to give it a serial number, date it and designate name of camp for which supplies are intended. Items most urgently needed should be starred and referred to by footnote so that the packer may be sure to include them in his load. As stated before, handle commissary items on a separate order. Send original copy in by packer or truck driver and retain carbons as camp record.

Ordering by phone does not eliminate necessity of writing out order on Form 877. Make out complete order and then read it off to merchant. It is very important that a copy of all orders placed be kept in the camp records. In such cases it is usually desirable to write across face of Form somewhat

as follows: "Ordered by phone 8-3/33," and then forward original copy to merchant at earliest convenience. This helps him in keeping records straight and serves as a documentary authorization for the purchase.

6. Insist on merchants sending an itemized statement or bill with each load.

7. When supplies arrive in camp check them carefully with merchant's bill and then compare bill with the camp copy of the order placed, so as to discover any shortages. If merchant fails to send itemized statement of supplies on load a list must be made out. All merchants' bills or lists of supplies received should be filed together, as at end of project it will be necessary for someone to vouch for all supplies received.

8. It is usually desirable to supply the truck driver, the packer or the merchant with a combination ration list so that the merchant may furnish the proper quantity of an equivalent substitute in case he is out of the article ordered.

9. When an order is only partially filled always have a clear understanding as to whether the balance will or will not be forwarded without further orders; *i. e.*, the merchant must know whether your new order does or does not include the sack of sugar which he was unable to send in on the previous order.

10. In case any supplies are taken off truck or pack train en route, have truck driver or packer secure and turn in a complete list of same.

11. In computing weights it may be figured that a ration for one man one day, including containers and cases, will average 6½ pounds, and that pack horses can carry an average of 150 pounds each.

TOOLS AND EQUIPMENT

Orders for tools and equipment needed on the fire line or in camp should be handled in the same way as orders for supplies. Be sure to make Form 877 for all telephoned orders. The initial shipment to the camp or subsequent shipments not ordered by the camp boss should be accompanied by Form 877 in duplicate. If no list is received it will be necessary to make one so that there will be a written record for every shipment. Every shipment away from camp should be accompanied by duplicate list on Form 877.

All shipments received should be checked against Forms 877 as unloaded and notation made of any shortages or damage. One copy of the form will then be receipted and returned to the officer making the shipment and the other filed.

When tools are unloaded they should be segregated by kinds and arranged conveniently so that they can readily be distributed to strawboss units when crews go to the fire line. All surplus tools should be arranged neatly and protected from the weather. Never allow tools to be scattered all over camp or to be taken by individuals without permission. If the volume of work warrants, a man should be put in charge of the handling of all matters relating to tools and equipment.

Strawbosses should be instructed to have their crews bring their tools to camp each night. A place for storing the tools used by each crew should be provided and marked with the strawboss' number or name. Broken tools must be brought in for repair or condemnation. Tools in need of reconditioning will be exchanged for others in good shape.

A competent man will be employed to sharpen and repair tools and equipment in camp. Where there are snags to be cut a thoroughly competent saw filer must be employed. If there is not enough filing to occupy all his time, he should work on other tools.

It is essential that all tools and equipment received from the regional warehouse be returned as soon as they can be spared, as they may be urgently needed on other fires. They should not be reconditioned if this will cause delay.

Responsibility for cleaning up and properly assembling tools and equipment when the project is completed rests with the camp boss unless he is specifically relieved. He should round up all equipment, make a complete inventory, determine exact losses and prepare Form 858 to cover. Tools that are broken beyond repair or worn out should be listed separately and turned in to the district ranger's headquarters for condemnation.

Unless otherwise instructed by the fire chief or district ranger, return all equipment to the cache from which it came, so far as this is possible. Make a list on Form 877, in duplicate, to accompany the equipment returned to each cache. It is a strict rule that all tools and equipment must be put in condition for immediate use before going into a cache. Whether this can be done best at the fire camp or elsewhere will be determined by the fire chief or district ranger. In any case the cost of such work is properly chargeable to the fire. Special attention must be given to cleaning and drying cooking and mess equipment. Standard kits must be carefully assembled and any shortage shown on tags attached to containers.

TRANSPORTATION

On account of varying local conditions it is difficult to define specifically the responsibility of the camp boss in the matter of transportation. It will be determined by the fire chief or crew boss on each particular project.

In most cases the transportation problem is handled from the district ranger's or supervisor's office, or from some other central point. Such Forest Service trucks and pack stock as are available are used,

but for large fires it is often necessary to hire private equipment under arrangements ordinarily made in advance as a part of the fire plan. Following is a list of the main things that should be attended to at the fire camp, except where they do not apply on account of the particular local conditions. Where the volume of this work warrants it should be delegated to a transportation man, with such assistance as is necessary.

1. Mark on map the routes to the fire camp.
2. Have truck drivers and packers post signs wherever needed to show the way to the camp. Poster No. P-15 may be obtained at the district ranger's headquarters for this purpose.
3. See that food, equipment, and commissary supplies reach the fire camp as ordered.
4. Inform camp boss how many pounds can be moved each trip with truck or pack train.
5. See that an adequate supply of gas, oil, and grease for trucks is always on hand.
6. See that truck drivers fill trucks with gas and attend to greasing and any other maintenance duties before leaving trucks at night.
7. See that truck drivers leave keys in trucks or turn them over to transportation man when going off duty.
8. See that truck drivers and packers have proper instructions as to destination, side trips, etc. They should have notebooks and pencils to record this information.
9. See that pack animals are loaded and unloaded at a reasonable distance from the kitchen and are promptly taken to the grounds prepared for them and well cared for.
10. Turn in time of truck drivers and packers working out of fire camp; also time for hired trucks and pack animals under owners' names so that timekeeper can complete Forms 877.
11. Determine from Forest emergency plan or from ranger's headquarters where additional trucks and pack animals can be secured as needed.

12. Arrange for relief truck drivers if absolutely necessary. It is best for one driver to handle the same truck all the time, getting rest while truck is being serviced and loaded between trips.

13. See that lunches are put up for truck drivers, packers, and helpers at the proper time to avoid any delays.

14. Where possible to use them, provide horses to carry lunches and water to fire line crews and for use as saddle horses by overhead officers.

It will frequently happen that pack trains will operate from a base camp on a road, or perhaps off the road, supplying one or more other camps. In such cases the loading and other packing duties must be closely supervised. In addition to the points listed above the following should be attended to:

1. Plan trip schedules so as to insure that all camps will be adequately served.

2. See that supplies and equipment most urgently needed are delivered first. Do not depend on packers to take the proper articles. See that the articles that should go on any particular trip are put into the packs.

3. See that packs are assembled, balanced, and laid out on the ground in a systematic manner whenever orders are received, so that there will be no delays.

4. Where supplies for more than one point are taken on one trip, tag each pack to show where it is to go.

5. Considering condition of trail and packing distance, determine weight to be packed per animal.

6. See that packers have invoices on Form 877 for all consignments. (Separate invoices for commissary supplies.)

7. See that pack stock are properly shod, that pack equipment is properly maintained, and that extra lash rope, cinches, etc., are on hand.

Where necessary to use passenger or light delivery cars owned by forest officers or temporary employees, including fire fighters and co-operators, for transporting men or supplies on fire suppression

work, rates should be paid as follows:

1. Driver alone, or carrying less than 3 fire fighters or less than 300 pounds of freight, 5 cents per mile.
2. Driver and three or more passengers, or 300 pounds or more of freight, 8 cents per mile.
3. Higher rates up to 12 cents per mile may be paid under special conditions where the supervisor feels that such rates are essential.

COMMUNICATION

On project fires, even of short duration, telephone communication should be established as quickly as possible and maintained from the camp to the district ranger's headquarters or other source of supply. Where there is more than one camp, communication should be established between them.

In nearly all cases it will be necessary to string emergency wire and care should be taken to see that it is put out of the way of stock and that connections and grounds are properly made. A limited number of radio sets are available through the regional office and before many miles of emergency wire are strung into the fire camp, the camp boss should consult the fire chief to see whether or not it is advisable to establish communication by radio.

It is the duty of the camp boss to see that communication is established and maintained. In most cases it is desirable to assign this job to a qualified man. Once the lines are established it will usually be possible to assign this man other duties in addition to maintenance of communication.

RECORD OF LIABILITIES AND PROGRESS OF FIRE

It is imperative that the camp boss keep an accurate record of all liabilities originating at the camp of which he has charge. He will be held to a strict accounting when the project is completed. While the fire is burning the district ranger or supervisor will usually call upon him each day for a statement of

liabilities and daily progress of the fire, which will include the following:

1. A reasonably close estimate of the cost per day for labor and other liabilities originating at camp.
2. Number of men employed.
3. Daily increase in area of fire.
4. Length of line built, and location.
5. Length of line lost, and location.
6. Length of line yet to be built to corral fire, with estimate as to when it will be completed.

Items 3 to 6 should be obtained from the crew boss. Items 3 to 5 should be recorded on a camp map.

The camp boss will not be concerned with bills originating at the supervisor's or district ranger's headquarters, covering such items as transportation of men from point of hire to fire, purchase and shipment of supplies and equipment, etc. Liabilities originating at the camp, for which the camp boss must account, may include any or all of the following:

1. Wages of temporary laborers and overhead hired for fire fighting. (Do not include time of yearlong officers or members of the regular short-term protective force temporarily employed on the fire.)
2. Cost of equipment, subsistence supplies, commissary, etc., purchased directly from the camp.
3. Cost of pack horses and motor vehicles operating from the camp.
4. Cost of transportation and board for employees en route when ordered from camp.
5. Miscellaneous liabilities incurred at camp.

The first requisite for keeping accounts straight is to have everything in writing. As brought out in previous pages, all orders or requisitions, even where telephoned, should be written in full on Form 877. Each order or requisition should be given a serial number.

The file copies of Form 877, remaining bound in the book, will be a complete serial record of orders for supplies and equipment, commissary (separate book and series of numbers), hire of pack stock, trucks,

and any other equipment, and requests for transportation, board at hotels or restaurants, lodging, etc., originating at camp. Form 877 should also be used to record all liabilities not originating at camp, but reported by the district ranger, other forest officers, packers, and truck drivers, for which merchants' bills or other written record is not received.

The camp time book, or duplicate time slips, commissary account book, Forms 877, and bills will constitute a complete written record of all known liabilities. These should be arranged in a systematic order so that needed information can be quickly obtained. On large projects it is advisable to use a part of the commissary account book, or a separate book, for ledger entries of bills received, showing simply the date, name of merchant and amount.

Approved copies of Forms 877 must be forwarded to the district ranger's office, or elsewhere as directed, as soon as the goods have been received and checked. This is particularly important in the case of orders from ranchers, country and small town merchants, and restaurants, as their accounts are ordinarily paid promptly without waiting until the end of the month.

ACCOUNTING ON FIRES WHERE THERE IS A POSSIBILITY OF COURT ACTION TO RECOVER COSTS

There are two classes of fires under this caption: (1) Fires originating through negligence or criminal acts of private parties, whether they occur on government, state or private lands. (2) Fires originating through no fault of the owner on private lands the protection of which is not provided for through a protective association or the payment of fire patrol tax. When it is necessary for the Forest Service to fight a fire in either of these classes and the owner of the land or the party responsible for the origin of the fire does not pay the costs directly or voluntarily reimburse the Service for its expenditures, action to recover the costs will be taken in the courts if sufficient evidence can be obtained. For this reason it is very important that the costs be kept in a manner to satisfy the courts that the expen-

ditures claimed were actually made. The following procedure will be observed in handling all cases as described above.

1. If the party responsible for the origin or control of the fire can be located, notice to control it will be given him on Form 11-R-6, L. E. 1.

2. If time will permit, effort will be made to get him to take the necessary action to control the fire or to sign Form LE-1, agreeing to pay the costs.

3. If he takes the action himself, of course no Forest Service accounting will be necessary. If he signs Form LE-1, the time slips and bills, kept in the usual manner, will be turned over to him for payment. In such cases the matter should be followed up to see that full payment is made.

4. If the responsible party will take no action and will not sign Form LE-1, the following procedure should govern:

- (a) The time should be kept by one man, if possible, throughout the action on the fire. This timekeeper should be a yearlong forest officer or a local temporary man who is known to be efficient and dependable and who can be reached later if needed to identify his records in court.

- (b) The fire chief, crew bosses and other overhead if possible should be local men, since they may be needed as witnesses.

- (c) If necessary to change strawbosses or timekeepers, time books should also be changed; two or more men should not make entries in one book. The timekeeper's or strawboss' name and address should be written on the time book used by him.

- (d) If two or more timekeepers make entries on one time slip, each should make a note in his diary, and initial his entries, showing the period he kept time on the fire so that later he can, if necessary, state positively which entries are his.

(e) The fire chief and the camp boss or timekeeper should keep in their diaries daily notes as to the progress of the fire and the work of controlling it. If necessary to work the crews more than ten hours per day, or to bring in new men, the reasons for this action should be noted.

(f) All time books, diaries, account books and other camp records should be carefully preserved and forwarded to the Supervisor's office.

COMPENSATION FOR INJURY REPORTS

The U. S. Employees' Compensation Act provides for relief of Government employees who are injured in the course of their employment. Reports to the Compensation Commission at Washington, D. C., are necessary and error or delay in their preparation may cause hardship to the employee. Form C. A. 1 must be signed by the injured employee or someone in his behalf within 48 hours after the injury. Form C. A. 2 provides for detailed information as to the injured employee and the injury; also for statements of two witnesses. Immediately after an injury occurs these two forms should be filled out completely and forwarded to the district ranger or supervisor.

If necessary, the injured employee should be sent to a designated physician, with a written request for treatment on Form C. A. 16. Where there is doubt as to whether the employee is entitled to medical care or compensation the request for treatment should be made on Form C. A. 17. A yearlong forest officer should always be consulted in such cases. In case of evident or alleged illness which is undoubtedly not the result of the man's employment, neither Form C. A. 16 nor Form C. A. 17 should be issued. If, however, the employee insists upon it, he should be allowed to sign Form C. A. 1, and Form C. A. 2 should be filled out showing the facts.

Where the injury is slight and the employee remains in camp until he recovers, or in case of death, Form C. A. 3 should be filled out. Form C. A. 4 is the employee's claim for compensation for medical

and other expenses incurred on account of his injury. Ordinarily this form is made out in the district ranger's or supervisor's office, but where an employee leaves camp on account of injury and later returns, his claim may be made out in camp. It may be sworn to before a notary or a yearlong forest officer and, in unusual cases, where neither is available, before a postmaster.

The main point to remember in connection with compensation forms is that they should be made out promptly while the circumstances of the injury are fresh in mind and the employee and witnesses are at hand to furnish necessary information. The district ranger or other yearlong officer should be consulted whenever any doubt arises as to correct procedure, and always in case of severe injury or illness. While employees who become ill are ordinarily not entitled to the benefits of the Compensation Act, everything possible should be done to relieve them and, if necessary, to enable them to reach medical aid.

RATION TABLES

In using the following tables refer to instructions under "Subsistence Supplies". For convenience the No. 2 or 2½ can is used in all tables as a unit for canned vegetables and fruits, and the No. 1 can for jam and milk. Fruit for lunches should be purchased in No. 1 cans, the number of cans given in the tables being increased in the ratio of two or three to one. For large camps vegetables and fruits should be ordered in No. 10 cans, using a ratio of one to four or five. Cheese should ordinarily be obtained in five-pound bricks. Sacked goods should never be ordered in larger than fifty-pound sacks unless it is known that they will not have to be packed.

1. Combination Ration Table—One Man for One Day

Column I		Column II
Balanced ration, one man one day	†Amount	Equivalent substitutes for staple items in Column I
Fresh meat.....	1.50 lbs.	Bacon, .7 lb.; ham, .9 lb.; canned meat, 1.2 lbs.; eggs, 12; beans, 1.0 lb.
Cheese.....	.06 lb.	Sweet chocolate, .06 lb.; fresh meat, .12 lb.
Beans.....	.2 lb.	Rice, hominy or lentils, .2 lb. baked beans, 1/3 can or .5 lb.
Bread.....	1.00 lb.	Flour, .8 lb.; crackers, .7 lb.; cornmeal, .8 lb.; macaroni, .7 lb.
Baking powder.....	.04 lb.	Yeast (for light bread, 1/5 cake); soda (for sour dough), .01 oz.
Oatmeal.....	.15 lb.	Cream of wheat, cornmeal, rice, cornflakes, .17 lb.
Potatoes.....	1.00 lb.	Rice, hominy or beans, .25 lb.; evaporated potatoes, .15 lb.
Fresh vegetables.....	.35 lb.	Peas, corn, 1/5 can or .25 lb.; tomatoes, 1/2 can or .9 lb.; dried vegetables, .07 lb.
Dried fruit.....	.1 lb.	Canned fruit, 1/4 can or .45 lb.; fresh fruit, .5 lb.; raisins, .10 lb.
Canned fruit.....	1/4 can	Jam or apple butter, 1/8 can; dried fruit, .10 lb.
Coffee.....	.13 lb.	Tea, .03 lb.; cocoa, .08 lb.
Sugar.....	.4 lb.	
Milk (evaporated).....	1/3 can	Fresh milk, 2/3 pt.; powdered milk, 2/3 oz.
Butter.....	.12 lb.	Peanut butter, .12 lb.
Lard.....	.1 lb.	Bacon grease, .10 lb.
Salt.....	.04 lb.	
Pepper.....	.06 oz.	Red pepper, .0015 lb.
*Syrup.....	1/12 pt.	
*Pickles.....	1/15 pt.	Vinegar, 1/25 pt.
*Cinnamon.....	.04 oz.	Ginger, nutmeg, cloves, mustard or allspice, 1/25 oz.
*Extracts.....	.03 oz.	
*Cornstarch.....	.02 lb.	Tapioca, .02 lb.
Matches.....	.....
Soap.....	.....
Total weight.....	6.0 lbs.	Lighter ration obtained by selecting the lighter substitutes.

*Essential only in permanent or moderately large camps.

†All weights given are exclusive of cans or other containers.

2. Simple Ration Table—One Man for One Day

Supplies	One day ration
Fresh meat, including fish (a).....	1.00 lb.
Cured meat or canned meat (b).....	.40 lb.
Cheese.....	.08 lb.
Bread, flour or crackers (c).....	.80 lb.
Baking powder or yeast cakes.....	.04 lb.
Cereals or corn meal.....	.15 lb.
Potatoes or other fresh vegetables (d)...	1.20 lbs.
Rice or beans.....	.20 lb.
Canned vegetables (e).....	.15 can
Dried fruit (f).....	.10 lb.
Canned fruit (g).....	.25 can
Sugar.....	.40 lb.
Coffee (h).....	.12 lb.
Milk, evaporated (i).....	.30 can
Butter (j).....	.10 lb.
Lard (k).....	.10 lb.
Salt.....	.04 lb.
Pepper.....	.08 oz.
*Syrup.....	.01 gal.
*Spices.....	.04 oz.
*Flavoring extracts.....	.04 oz.
Pickles.....	.03 qt.
*Vinegar.....	.01 qt.
Soap and matches.....	
Total weight.....	6 lbs.

Substitutions which may be made.

- (a) 8 eggs = 1 lb. fresh meat.
- (b) 2 lbs. fresh meat = 1 lb. cured meat.
- (c) 1 lb. cornmeal or 1 lb. macaroni = 1 lb. flour.
- (d) 1 lb. dried vegetables = 5 lbs. fresh vegetables.
- (e) 1 1/5 lb. dried or 1 lb. fresh vegetables = 1/2 can (standard size).
- (f) 5 lbs. fresh fruit = 1 lb. dried fruit.
- (g) 1/3 lb. dried fruit = 1 "No. 2 can" canned fruit.
- (h) 1/4 lb. tea or 5/8 lb. cocoa = 1 lb. coffee.
- (i) 1 qt. fresh milk = 1 "tall" can evaporated milk.
- (j) 1 1/2 lbs. peanut butter = 1 lb. creamery butter.
- (k) 1 lb bacon grease = 1 lb. lard.

* Essentials only in large or permanent camps.

3. Ration Table—To be used where packing farther than five miles is necessary

	Three-day Rations for						
	5 Men	10 Men	15 Men	20 Men	30 Men	40 Men	50 Men
Bacon .....lb.	4	8	13	17	25	34	42
Ham .....lb.	6	11	16	22	32	43	54
Eggs .....doz.	3	6	9	12	18	24	30
Cheese .....lb.	1	2	3	4	5	7	9
Beans, dry, red, white, Lima.....lb.	3	6	9	12	18	24	30
Bread .....lb.	12	24	36	48	72	96	120
Macaroni .....lb.	2	4	6	8	12	16	20
Flour .....lb.			10	10	25	25	25
Pancake Flour.....lb.	10	10					
Baking Powder .....lb.			1	1	1	2	2
Cereals—oatmeal, farina, cornmeal.....lb.	3	6	9	12	18	27	27
Dry Onions.....lb.	1	2	3	4	6	8	10
Potatoes .....lb.	8	15	23	30	45	60	75
Rice .....lb.	2	4	6	8	12	15	20
Fresh Vegetables—carrots, cabbage, turnips, beets .....lb.	2	3	4	5	8	10	13
Canned Vegetables—corn, peas, string beans, tomatoes, spinach .....can	4	8	12	15	24	30	40
Dried Fruit—prunes, raisins, peaches, apples, apricots .....lb.	2	3	4	5	7	9	12
Canned Fruit—peaches, pears, berries, pine- apple .....can	1	2	3	4	5	8	10

Ration Table—To be used where packing farther than five miles is necessary (*Continued*)

	Three-day Rations for						
	5 Men	10 Men	15 Men	20 Men	30 Men	40 Men	50 Men
Jam .....can	2	4	6	8	12	15	20
Coffee .....lb.	2	3	4	5	8	10	12
Tea .....lb.	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	1	1	1
Cocoa .....lb.	$\frac{1}{2}$	1	1	1	2	3	3
Sugar .....lb.	6	12	20	25	35	50	60
Milk, canned (full ration).....can	5	10	15	20	30	40	50
Milk, powdered (full ration, substitute if available) .....lb.	1	2	2	3	4	5	6
Butter .....lb.	2	3	5	6	9	12	15
Peanut Butter .....lb.	$\frac{1}{2}$	$\frac{1}{2}$	1	1	2	3	3
Lard ($\frac{1}{2}$ ration. Use bacon grease).....lb.	1	2	2	3	5	6	8
Salt .....lb.	1	1	2	3	4	5	6
Pepper .....oz.	2	2	4	4	6	8	10
Syrup .....qt.	1	1	2	3	4	5	6
Spices—cinnamon, nutmeg, ginger, cloves.....oz.	.....	.....	2	3	4	5	6
Extracts—lemon, vanilla .....oz.	.....	.....	2	2	3	4	5
Cornstarch, tapioca .....lb.	.....	.....	1	1	2	3	3
Matches .....box	1	1	1	2	2	2	3
Hand Soap .....bar	1	2	2	3	5	7	9
Laundry Soap .....bar	1	1	1	2	3	4	5
Approximate total weight.....lb.	95	175	260	340	520	690	855

4. Ration Table--To be used where packing farther than five miles is necessary

	Five-day Rations for						
	5 Men	10 Men	15 Men	20 Men	30 Men	40 Men	50 Men
Bacon .....lb.	7	14	20	30	40	60	65
Ham .....lb.	9	18	30	40	55	75	85
Eggs .....doz.	5	10	15	15	30	30	60
Cheese .....lb.	2	3	4	6	9	12	15
Beans, dry, red, white, Lima.....lb.	5	10	15	20	30	40	50
Bread .....lb.	20	40	60	80	120	160	200
Macaroni .....lb.	3	5	8	12	18	25	30
Flour .....lb.			25	25	25	25	25
Pancake Flour.....lb.	10	10					
Baking Powder.....lb.			1	1	2	2	2
Cereals--oatmeal, farina, cornmeal.....lb.	9	9	9	18	27	27	36
Dry Onions.....lb.	2	5	7	10	15	20	25
Potatoes .....lb.	12	25	37	50	75	100	125
Rice .....lb.	3	6	10	12	20		30
Fresh Vegetables--carrots, cabbage, turnips, beets .....lb.	3	5	8	10	15	25	25
Canned Vegetables--corn, peas, string beans, tomatoes, spinach .....can	6	12	12	18	24	20	48
Dried Fruit--prunes, raisins, peaches, apples, apricots .....lb.	2	4	6	8	12	36	20
Canned Fruit--peaches, pears, berries, pine- apple .....can	2	3	6	6	12	12	18
Jam .....can	3	6	9	12	18	24	30

Ration Table—To be used where packing farther than five miles is necessary (*Continued*)

	Five-day Rations for						
	5 Men	10 Men	15 Men	20 Men	30 Men	40 Men	50 Men
Coffee .....lb.	3	5	6	9	12	15	20
Tea .....lb.	$\frac{1}{4}$	$\frac{1}{2}$	1	1	1	2	2
Cocoa .....lb.	$\frac{1}{2}$	1	2	2	3	4	5
Sugar .....lb.	10	25	25	50	75	100	100
Milk, canned (full ration).....can	9	18	24	36	48	72	96
Milk, powdered (full ration, substitute if available) .....lb.	1	2	3	5	6	9	12
Butter .....lb.	4	6	8	10	16	20	26
Peanut Butter .....lb.	$\frac{1}{2}$	1	1	2	3	4	5
Lard ($\frac{1}{2}$ ration. Use bacon grease).....lb.	2	3	4	5	8	10	12
Salt .....lb.	3	3	3	3	6	9	12
Pepper .....oz.	2	4	4	6	8	12	16
Syrup .....qt.	1	2	3	4	6	8	12
Spices—cinnamon, nutmeg, ginger, cloves.....oz.			3	4	6	8	10
Extracts—lemon, vanilla .....oz.			2	3	4	6	8
Cornstarch, tapioca .....lb.			2	2	3	4	5
Matches .....box	1	1	2	3	4	5	6
Hand Soap .....bar	2	3	4	6	8	10	12
Laundry Soap .....bar	1	2	2	3	3	4	6

5. Ration Table—To be used along roads or where packing no farther than 5 miles is necessary

	Five-day Rations for						
	5 Men	10 Men	15 Men	20 Men	30 Men	40 Men	50 Men
Fresh Meat .....lb.	15	30	45	60	90	120	150
Bacon .....lb.	4	7	10	15	21	30	35
Ham .....lb.	4	9	14	20	27	40	40
Eggs .....doz.	5	10	15	15	30	30	60
Cheese .....lb.	2	3	4	6	9	12	15
Beans, dry, red, white, Lima.....lb.	5	10	15	20	30	40	50
Bread .....lb.	20	40	60	80	120	160	200
Macaroni .....lb.	3	5	8	12	18	25	30
Flour .....lb.			25	25	25	25	25
Pancake Flour.....lb.	10	10					
Baking Powder .....lb.			1	1	2	2	2
Cereals—oatmeal, farina, cornmeal.....lb.	9	9	9	18	27	27	36
Dry Onions.....lb.	2	5	7	10	15	20	25
Potatoes .....lb.	20	35	50	75	125	150	200
Rice .....lb.	2	3	5	6	9	12	16
Fresh Vegetables—carrots, cabbage, turnips, beets .....lb.	5	9	13	18	25	35	45
Canned Vegetables—corn, peas, string beans, tomatoes, spinach .....can	4	6	12	12	24	24	36
Dried Fruit—prunes, raisins, peaches, apples, apricots .....lb.	2	2	2	3	5	7	10
Fresh Fruit—apples, plums, lemons.....lb.	3	6	10	12	20	25	30
Canned Fruit—peaches, pears, berries, pine- apple .....can	3	6	12	12	24	24	36

Ration Table—To be used along roads or where packing no farther than 5 miles is necessary (*Continued*)

	Five-day Rations for						
	5 Men	10 Men	15 Men	20 Men	30 Men	40 Men	50 Men
Jam .....can	3	6	9	12	18	24	30
Coffee .....lb.	3	5	6	9	12	15	20
Tea .....lb.	$\frac{1}{4}$	$\frac{1}{2}$	1	1	1	2	2
Cocoa .....lb.	$\frac{1}{2}$	1	2	2	3	4	5
Sugar .....lb.	10	25	25	50	75	100	100
Milk .....can	9	18	24	36	48	72	96
Butter .....lb.	3	5	8	10	15	20	25
Peanut Butter .....lb.	$\frac{1}{2}$	1	1	2	3	4	5
Lard ($\frac{1}{2}$ ration. Use bacon grease).....lb.	2	3	4	5	8	10	12
Salt .....lb.	3	3	3	3	6	9	12
Pepper .....oz.	2	4	4	6	8	12	16
Syrup .....qt.	1	2	3	4	6	8	12
Pickles .....qt.	1	2	3	4	5	6	8
Catsup .....bot.			3	4	6	8	12
Spices—cinnamon, nutmeg, ginger, cloves.....oz.			3	4	6	8	10
Extracts—lemon, vanilla .....oz.			2	3	4	6	8
Cornstarch, tapioca .....lb.			2	2	3	4	5
Matches .....box	1	1	2	3	4	5	6
Hand Soap .....bar	2	3	4	6	8	10	12
Laundry Soap .....bar	1	2	2	3	3	4	6

FORMS AND STATIONERY

The following lists show forms and stationery needed in fire camps. Quantities will, of course, depend on number of men.

1. For small camps (15 men or less or where special camp boss or timekeeper is not necessary).
 - 24 Form F-2-R-1 Time Slip
 - 1 book Form 877
 - 1 Ranger's Note Book
 2. For large camps (more than 15 men or where services of camp boss or timekeeper are necessary).
 - Twice No. of crew—Form F-2-R-1 time slip
 - 1 to 4 Time Books, Form 880
 - 1 Time Book, Form 875, for each 10 men
 - 1 to 4 books, Form 877
 - 1 to 3 Account Books (Alphabetical)
 - 2 to 8 Ranger's Note Books
 - 8 Form 858
 - 1 book Form 1012D
 - 1 set Forms C. A. 1, 2, 3, 4 (These are scarce.
When a form is used request replacement
from district ranger)
- 1 Indelible Pencil
1 or 2 No. 2 Pencils
Soft carbon paper (size of time slip)
1 copy of this Pamphlet
1 copy of Fire Wage Schedule
2 to 6 Indelible Pencils
White Letter Paper
Yellow Letter Paper
24 sheets soft carbon paper (size of time slip)
1 box Paper Clips
Sufficient plain linen tags to provide for each man
in crew
Surplus linen tags for marking packs, etc.
Safety pins, one for each man with a few extra

STANDARD OUTFITS OF TOOLS AND EQUIPMENT AS FURNISHED FROM VANCOUVER

	25-Man	50-Man
Axes, D. B., handled.....	12	24
Bags, water, 2-gallon.....	6	12
Bed rolls (4 blankets and canvas).....	25	50
Buckets, canvas, water.....	3	6
Cans, back pack, with pump.....	2	4
Canteens, ½ or 1 gallon.....	2	4
Case, carrying, or outfit, timekeeper's.....	1	1
Files, 10".....	12	24
Files, 8".....	6	12
Flies, for 10 x 12 tent.....	1	2
Grinders, hand, with oil.....	1	2
Headlights, electric.....	3	6
Hoes, hazel, with handles.....	12	24
Irons, camp fire.....	1 set	2 sets
*Irons, springboard, with bolts and combination wrench and brace.....	2 pr.	4 pr.
Kits, first aid.....	1	2
Knapsacks.....	4	8
Lanterns, with oil.....	4	8
Lanterns, gasoline.....	1	2
Outfits, cobbler's.....	1	1
Outfits, mess, 25-man.....	1	2
Outfits, sawfiling.....	1	2
Rasps, wood.....	2	2
Saws, bucking, with 2 handles.....	1	2
Saws, felling, with 2 handles.....	2	4
Shovels, long-handled.....	12	24
Sledges, 8# or 4#.....	3	6
Stoves, Kimmel, with pipe.....	1	2
Tents, 10 x 12.....	1	2
Torches, back-firing.....	1	2
Wedges, 5-6# or 2 ½#.....	6	12
Whetstones.....	8	16

*For west-side forests only.

Additional articles needed or any of above articles not needed should be specified in order.

Job No. 3758

Date 7-12-33

Ordered for R-6

No. of copies 374

No. of impressions 5174

Cost: 65 03

Labor 35 77

Overhead 39 04

Stock

Illustrations 26 66

Plates 54 45

Other

Total 220 95

New composition

Part Pickups Standing

Old plates Overprint